

**Case 3531*****Sematura* Dalman, 1825 (Insecta, Lepidoptera, SEMATURIDAE):  
proposed precedence over *Mania* Hübner, 1821**

Matthew J.W. Cock

*CABI, Rue des Grillons 1, CH-2800 Delémont, Switzerland*  
(e-mail: m.cock@cabi.org; mjwcock@btinternet.com)

Gerardo Lamas

*Departamento de Entomología, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Av. Arenales 1256, Apartado 14-0434, Lima-14, Peru* (e-mail: glamasm@unmsm.edu.pe; paititia@yahoo.com)

**Abstract.** The purpose of this application, under Article 23.9.3 of the Code, is to conserve the generic name *Sematura* Dalman, 1825 (Lepidoptera, SEMATURIDAE) which is well-established for a small number of moths widespread in the Neotropical region. Because it is also the type genus of the small family SEMATURIDAE, it is usually cited or illustrated in general works on Lepidoptera and insects in the region. The name is threatened by its rarely used senior subjective synonym, *Mania* Hübner, 1821, which dropped out of use because it was incorrectly considered to be an unavailable homonym. It is proposed that *Sematura* Dalman be given precedence over *Mania* Hübner under the plenary power of the Commission, in the interest of nomenclatural stability.

**Keywords.** Nomenclature; taxonomy; Insecta; Lepidoptera; SEMATURIDAE; *Sematura*; *Mania*; *Nothus*; *Sematura lunus*; *Mania empedoclararia*; moths; Neotropical Region.

---

1. The Lepidoptera family SEMATURIDAE contains a small number of species from the Neotropical region and South Africa. It is based on the generic name *Sematura* Dalman, 1825 (p. 407), which has been widely used in the limited literature on this family since the middle of the 19th century. An earlier available name, *Mania* Hübner, 1821, which had been thought to be unavailable, now threatens the stability of the type genus of this family.

2. *Mania* was established by Hübner (1821, p. [3]) for the single species *Lars empedoclararia* Hübner, [1819], a junior subjective synonym of *Papilio empedocles* Cramer, 1779 (Fletcher, 1979), although it has also been considered a junior subjective synonym of *Phalaena lunus* Linnaeus, 1758 (p. 508) (Hampson, 1918, p. 368).

3. Westwood (1879, p. 510) incorrectly considered *Mania* Hübner, 1821 to be a junior homonym of *Mania* Treitschke, 1825 (p. 294), and introduced the replacement name *Manidia*. However, *Mania* Hübner pre-dates *Mania* Treitschke, so Westwood's replacement was unjustified.

4. *Sematura* was established by Dalman (1825, p. 407) to include *Phalaena lunus* Linnaeus, 1758 (p. 508), *Papilio aegisthus* Fabricius, 1781 (p. 20) and *Papilio*



*empedocles* Cramer, 1779 (p. 11). Guenée (1857, pp. 16–19) used the genus *Sematura*, listing *Mania* as a synonym, to include the species *Phalaena lunus*, *Sematura selene* Guenée, 1857, *S. diana* Guenée, 1857, *Papilio empedocles* and *S. phoebe* Guenée, 1857. Hampson (1918, p. 367) incorrectly referred to *Sematura* as Guenée's genus, but nevertheless selected as its type species *Phalaena lunus*.

5. Several authors have used the generic name *Nothus* Billberg (1820, p. 85) for *Phalaena lunus* and *Papilio empedocles*, but *Nothus* is a junior homonym of *Nothus* Olivier, 1811 (p. 383), and also its type species was designated as *Phalaena lunus* by Fletcher (1979), so making it a senior objective synonym of *Sematura*. This invalid homonym is not germane to the status of *Sematura* and *Mania*, but continues to confuse the nomenclature of this genus.

6. The species of *Sematura* have not had the benefit of a recent revision, hence there is continuing uncertainty about the number of species and their identity. Gaede (1930, p. 832) suggested that *empedocles* and *lunus* are likely to be one species, and Forbes (1942, p. 289) treats *lunus* as the male and *empedocles* as the female synonym. In our opinion, although it is quite likely that Linnaeus described the male and Cramer described the female of the same species, this is not a foregone conclusion as there appear to be other similar species in the genus. Until the genus is revised this will not be clear, however all authors have always treated the two specific names as congeneric, and there seems no doubt that the two generic names are subjective synonyms.

7. That being the case, *Mania* has precedence over *Sematura*. However, *Sematura* is in common usage, while *Mania* is almost forgotten. Forbes (1942, p. 289) treats *Mania* and *Manidia* as synonyms of *Sematura*, commenting correctly that '*Mania* Hübner 1823 [sic], is valid over *Mania* Tr. 1825, but only the latter has had any currency in the last century.' More than 50 years later, this is still true.

8. Unfortunately *Sematura* cannot be given precedence over *Mania* under article 23.9.2 of the Code, as *Mania* has been used as valid at least four times since 1899. Kaye (1901, p. 150) used it with *Sematura* placed in brackets afterwards (misspelt as *Semaetura*) for *empedoclaria* (= *empedocles*) and *actaeon* Felder (= *lunus*) in his preliminary list of the moths of Trinidad. In a popular article, Janet (1902, p. 349) referred to *Mania empedoclaria* Hübner as inhabiting '*. . . Haïti et quelques autre [sic] îles des Antilles*'. Dyar (1914, p. 244) used it for *lunus* and *empedocles* in his treatment of the moths of the Canal Zone, Panama. Fischer-Sigwart (1923, p. 22) mentioned *Mania lunus* in a list of Brazilian Lepidoptera. Apart from these four instances, all publications located referring to the genus since 1899 have used either *Sematura* (Pagenstecher, 1907; Longstaff, 1912; Pfeiffer, 1917; Hampson, 1918; Jordan, 1923; Eltringham, 1925; Kaye & Lamont, 1927; Eltringham, 1929; Gaede, 1930; Brues & Melander, 1932; Eltringham, 1933; Forbes, 1942; D'Almeida, 1943; Portmann, 1945; Cardoso, 1949; Costa Lima, 1950; Biezanko et al., 1957; Fulton, 1967; Batten & Batten, 1968; Stanek, 1969; Smith, 1972; Dickens, 1974; Sbordonni & Forestiero, 1985; Beutelspacher, 1988, 1992; Scoble, 1992; Minet & Scoble, 1998; Fänger, 1999; Salazar, 2001; Viana & Costa, 2001; Cock, 2003; Núñez, 2004; Corona et al., 2005; Chacón & Montero, 2007; Regier et al., 2008; Heppner, 2008; Mutanen et al., 2010), *Manidia* (Calvert & Calvert, 1917, p. 64) or *Nothus* (Laithwaite et al., 1975; Lamas, 1989; Hogue, 1993; Racheli & Racheli, 1996; Purser & Garnier, 2007; Scott et al., 2010).



9. Internet usage is similarly based on *Sematura* and *Nothus*, with no further use of *Mania* or *Manidia*. Thus, the number of hits with Google for different combinations of *Sematura* spp. together with Lepidoptera on 1 July 2010 was as follows: *Mania lunus* 1; *Mania empedocles* 1; *Manidia lunus* 0; *Manidia empedocles* 0; *Sematura lunus* 110; *Sematura empedocles* 9; *Nothus lunus* 40; *Nothus empedocles* 22. It should be noted that the use of a combination does not mean that this is the accepted name on a given website; it may be listed as a synonym or incorrect name. However, it is clear that *Mania* is not in common usage for the two principal species of *Sematura*.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *Sematura* Dalman, 1825 precedence over the name *Mania* Hübner 1821, whenever the two are considered to be synonyms;
- (2) to place on the Official List of Generic Names in Zoology the following names:
  - (a) *Sematura* Dalman, 1825 (gender: feminine), type species by subsequent designation by Hampson (1918) *Phalaena lunus* Linnaeus, 1758, with the endorsement that it is to be given precedence over *Mania* Hübner, 1821 whenever the two are considered to be synonyms;
  - (b) *Mania* Hübner, 1821 (gender: feminine), type species by monotypy *Lars empedoclaria* Hübner, [1819], with the endorsement that it is not to be given precedence over *Sematura* Dalman, 1825 whenever the two are considered to be synonyms;
- (3) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *lunus* Linnaeus, 1758, as published in the binomen *Phalaena lunus*, specific name of the type species of *Sematura* Dalman, 1825;
  - (b) *empedoclaria* Hübner, [1819], as published in the binomen *Lars empedoclaria*, specific name of the type species of *Mania* Hübner, 1821.

## References

- Batten, A.G.M. & Batten, A.M.** 1968. Seven weeks in Jamaica, winters 1966–1967. *Entomologist's Record and Journal of Variation*, **80**(1): 3–7.
- Beutelspacher, C.R.** 1988. Revisión de la familia Uraniidae (Insecta: Lepidoptera) en México. *Anales del Instituto de Biología. Universidad Nacional Autónoma de México (Zoología)*, **58**(1): 265–325.
- Beutelspacher, C.R.** 1992. Catálogo de la Colección Roberto Müller (Lepidoptera: Heterocera) del Museo de Historia Natural de la Ciudad de México. *Cuadernos. Instituto de Biología. Universidad Nacional Autónoma de México*, **15**: 1–465.
- Biezanko, C.M., Ruffinelli, A. & Carbonell, C.S.** 1957. Lepidoptera del Uruguay. Lista anotada de especies. *Revista de la Facultad de Agronomía. Universidad de la República (Montevideo)*, **46**: 1–152.
- Billberg, G.J.** 1820. *Enumeratio insectorum in Museo Gust. Joh. Billberg*. 138 pp. Typis Gadelianis, Holmiae [= Stockholm], Sweden.
- Brues, C.T. & Melander, A.L.** 1932. Classification of insects. A key to the known families of insects and other terrestrial arthropods. *Bulletin of the Museum of Comparative Zoology at Harvard College*, **73**: 1–672.
- Calvert, A.C.S. & Calvert, P.P.** 1917. *A year of Costa Rican natural history*. xxii, 577 pp. The Macmillan Company, New York.
- Cardoso, A.S.** 1949. Lepidópteros de Alagoas. *Revista de Entomologia (Rio de Janeiro)*, **20**(1/3): 427–436.



- Chacón, I.A. & Montero, J.J.** 2007. *Mariposas de Costa Rica. Butterflies and moths of Costa Rica*. 366 pp. Instituto Nacional de Biodiversidad, Santo Domingo de Heredia.
- Cock, M.J.W.** (2003) On the number of species of moths (Lepidoptera) in Trinidad and Tobago. *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club*, **2003**: 49–58.
- Corona, A.M., Acosta, R. & Morrone, J.J.** 2005. Estudios biogeográficos en insectos de la Zona de Transición Mexicana. Pp. 71–87 in Morrone, J.J. & Llorente Bousquets, J. (Eds.), *Componentes bióticos principales de la Entomofauna Mexicana. Volumen 1*. Las Prensas de Ciencias, UNAM, Mexico.
- Costa Lima, A. da.** 1950. *Insetos do Brasil, 6.º Tomo. Lepidópteros 2.ª Parte*. 420 pp. Escola Nacional de Agronomia, Rio de Janeiro.
- Cramer, P.** 1779. *De uitlandsche Kapellen voorkomende in de drie Waereld-Deelen Asia, Africa en America – Papillons exotiques des trois parties du monde l'Asie, l'Afrique et l'Amérique*, part 17. 11–20 pp. J. van Schoonhoven, Amsterdam.
- Dalman, J.W.** 1825. Försök att närmare bestämma släktet *Castnia* Fabr., samt de detsamma tillhörande Arter. *Kongl. Vetenskaps-Academiens Handlingar*, **1824**(2): 392–407.
- D'Almeida, R.F.** 1943. Sobre a nomenclatura de alguns grupos superiores da Ordem Lepidoptera. 2.a nota: Famílias Lasiocampidae, Lymantriidae, Mimallonidae e Uraniidae e superfamília Arctioidea. *Arquivos do Museu Paranaense*, **3**: 131–143.
- Dickens, M.** 1974. *The world of moths*. 128 pp. The Macmillan Company, New York.
- Dyar, H.G.** 1914. Report on the Lepidoptera of the Smithsonian Biological Survey of the Panama Canal Zone. *Proceedings of the United States National Museum*, **47**: 139–350.
- Eltringham, H.** 1925. On a new sense organ in certain Lepidoptera. *Transactions of the Entomological Society of London*, **1925**: 7–9, plate II.
- Eltringham, H.** 1929. On a new organ in certain Lepidoptera. *Transactions of the Entomological Society of London*, **77**: 471–473.
- Eltringham, H.** 1933. *The senses of insects*. ix, 126 pp. Methuen & Co. Ltd., London.
- Fabricius, J.C.** 1781. *Species Insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin adiectis observationibus, descriptionibus*, vol. 2. 517 pp. C.E. Bohnii, Hamburgi & Kilonii.
- Fänger, H.** 1999. Comparative morphology of tergal phragmata occurring in the dorsal thoraco-abdominal junction of ditrysian Lepidoptera (Insecta). *Zoomorphology*, **119**(3): 163–183.
- Fischer-Sigwart, H.** 1923. Schmetterlinge vom Amazonenstrom in Brasilien im Zofinger Museum. *Societas Entomologica*, **38**(6): 21–23.
- Fletcher, D.S.** 1979. *The generic names of moths of the world. Volume 3. Geometroidea*. 263 pp. British Museum (Natural History), London.
- Forbes, W.T.M.** 1942. The Lepidoptera of Barro Colorado Island, Panama. No. 2. *Bulletin of the Museum of Comparative Zoology*, **90**: 265–406, pls 9–16.
- Fulton, M.** 1967. A list of Lepidoptera collected in Costa Rica. *Revista de Biología Tropical* (San José), **14**(2): 287–292.
- Gaede, M.** 1930. Uranidae. Pp. 829–837, pls. 138–139 in Seitz, A. (Ed.), *The Macrolepidoptera of the world; a systematic description of the hitherto known Macrolepidoptera, ed. in collaboration with well-known specialists. Volume 6*. A. Kern, Stuttgart.
- Guenée, A.** 1857. Uranides et Phalénites Tome 1. In Boisduval, [J.A.] & Guenée, [A.] *Histoire naturelle des insectes; espèces général des lépidoptères. Tome IX*. 514 pp. Roret, Paris.
- Hampson, G.F.** 1918. Some small families of the Lepidoptera which are not included in the key to the families in the catalogue of Lepidoptera Phalaenae, a list of the families and subfamilies of the Lepidoptera with their types and a key to the families. *Novitates Zoologicae*, **25**(2): 366–394.
- Heppner, J.B.** 2008. American swallowtail moths (Lepidoptera: Sematuridae). P. 149 in Capinera, J.L. (Ed.), *Encyclopedia of entomology, 2nd edition*. Springer, Netherlands.
- Hogue, C.L.** 1993. *Latin American insects and entomology*. xiv, 536pp. University of California Press, Berkeley and Los Angeles, California.
- Hübner, J.** 1821. *Index exoticorum lepidopterorum, in foliis 244 a Jacobo Hübner hactenus effigiatorum; adjectis denominationibus emendatis, tam communioribus quam exactioribus*. 7 pp. The author, Augsburg.



- Janet, A. 1902. Les Papillons. *Causeries scientifiques de la Société Zoologique de France*, **1**(9): 309–350, 1 plate.
- Jordan, K. 1923. On a sensory organ found on the head of many Lepidoptera. *Novitates Zoologicae*, **30**(1): 155–158.
- Kaye, W.J. 1901. A preliminary catalogue of the Lepidoptera Heterocera of Trinidad. *Transactions of the Entomological Society of London*, **1901**: 115–158, pls. 5–6.
- Kaye, W.J. & Lamont, N. 1927. A catalogue of the Trinidad Lepidoptera Heterocera (moths). *Memoirs of the Department of Agriculture, Trinidad and Tobago*, **3**: 1–144.
- Laithwaite, E., Watson, A. & Whalley, P.E.S. 1975. *The dictionary of butterflies and moths in colour*. 298 pp. George Rainbird Ltd., London.
- Lamas, G. 1989. Lista preliminar de los Saturniidae, Oxytenidae, Uraniidae y Sematuridae (Lepidoptera) de la Zona Reservada de Tambopata, Madre de Dios, Perú. *Revista Peruana de Entomología*, **31**: 57–60.
- Linnaeus, C. 1758. *Systema naturæ per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Tomus I. Editio decima, reformata*. pp. [1–4], 1–824. Salvius, Holmiæ [=Stokholm].
- Longstaff, G.B. 1912. *Butterfly-hunting in many lands. Notes of a field naturalist*. xx, 729 pp. Longmans, Green & Co., London.
- Minet, J. & Scoble, M.J. 1998. 17. The Drepanoid / Geometroid assemblage. Pp. 301–320 in Kristensen, N.P. (Ed.), *Lepidoptera, butterflies and moths. Vol. 1. Evolution, systematics and biogeography*. Handbook of Zoology, Volume 4. Arthropoda: Insecta, Part 35. Walter de Gruyter Inc. New York.
- Mutanen, M., Wahlberg, N. & Kaila, L. 2010. Comprehensive gene and taxon coverage elucidates radiation patterns in moths and butterflies. *Proceedings of the Royal Society (B)*, **277**(1695): 2839–2848.
- Núñez, R. 2004. Lepidoptera (Insecta) de Topes de Collantes, Sancti Spiritus, Cuba. *Boletín de la Sociedad Entomológica Aragonesa*, **34**: 151–159.
- Olivier, G.A. 1811. *Encyclopédie méthodique: Histoire naturelle. Insectes*, vol. 8. 722 pp. H. Agasse, Imprimeur-Libraire, Paris.
- Pagenstecher, A.A.F. 1907. Die Lepidopterenfauna der Antillen. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **60**: 91–102.
- Pfeiffer, L. 1917. Bemerkungen über einige von Herrn A. H. Fassel in Columbien gefangene *Castnia*-, *Urania*- und *Homidiana*-Arten. *Entomologische Zeitschrift*, **31**(3): 11–12.
- Portmann, A. 1945. *The beauty of butterflies*. 11 pp. Iris Books, New York.
- Purser, B.H. & Garnier, M. 2007. La lépidofaune guyanaise – Originalité et abondance. Pp. 6–12 in Lacomme, D. & Manil, L. (Eds.), *Lépidoptères de Guyane. Tome 1. Généralités – Bibliographie. Hétérocères 1*. Lépidoptéristes Parisiens, Paris.
- Racheli, L. & Racheli, T. 1996. Note preliminari sugli Oxytenidae e Sematuridae dell'Ecuador (Lepidoptera). *Bollettino della Società Entomologica Italiana*, **128**(2): 151–154.
- Regier, J.C., Cook, C.P., Mitter, C. & Hussey, A. 2008. A phylogenetic study of the 'bombycoid complex' (Lepidoptera) using five protein-coding nuclear genes, with comments on the problem of macrolepidopteran phylogeny. *Systematic Entomology*, **22**(1): 175–189.
- Salazar, J.A. 2001. Contribución al conocimiento de las especies pertenecientes a los géneros *Homidiana* Strand y *Sematura* Dalman (Lepidoptera: Sematuridae) de Colombia. *Boletín Científico, Museo de Historia Natural, Universidad de Caldas*, **5**: 125–126.
- Sbordoni, V. & Forestiero, S. 1985. *The world of butterflies*. 312 pp. Blandford Press, Dorset.
- Schmid, M. & Endicott, B.M. 1968. *Mariposas de Venezuela*. xi, 67 pp. L. Levison Junr., Copenhagen.
- Scoble, M.J. 1992. *The Lepidoptera: form, function and diversity*. 404 pp. Oxford University Press, Oxford.
- Scott, J.L., Kawahara, A.Y., Skevington, J.H., Yen, S.-H., Sami, A., Smith, M.L. & Yack, J.E. 2010. The evolutionary origins of ritualized acoustic signals in caterpillars. *Nature Communications*, **1**(4): 1–9.
- Smith, N.G. 1972. Migrations of the day-flying moth *Urania* in Central and South America. *Caribbean Journal of Science*, **12**: 45–48.



- Stanek, V.J.** 1969. *The pictorial encyclopedia of insects*. 544 pp. Hamlyn, London.
- Treitschke, [G].F.** 1825. *Die Schmetterlinge von Europa*, vol. 5(1). xvi, 414 pp. Gerhard Fleischer, Leipzig.
- Viana, T.M.B. & Costa, E.C.** 2001. Lepidópteros associados a duas comunidades florestais em Itaara, RS. *Ciência Florestal* (Santa Maria), **11**(1): 67–80.
- Westwood, J.O.** 1879. Observations on the Uraniidae, a family of lepidopterous insects, with a synopsis of the family and a monograph of *Coronidia*, one of the genera of which it is composed. *Transactions of the Zoological Society*, **10**: 507–542, pls. 85–88.

Acknowledgement of receipt of this application was published in BZN **67**: 198.

---

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: [iczn@nhm.ac.uk](mailto:iczn@nhm.ac.uk)).